

AN IMPROVED LINEAR ACTUATOR

ABSTRACT OF THE DISCLOSURE

5 An improved linear actuator incorporates a DC motor whose stator is secured to a frame is provided for. To improve operational longevity and reliability of a linear actuator, the improved actuator includes a retention clutch and an axial load limiter. An axially configured retention clutch is configured to slidably fit within the open inner channel diameter of an axial load limiter and over a motor shaft of a linear
10 actuator. In operation, the retention clutch reduces the impact loads on the stop and extending the fatigue life of these wearable components. Similarly, when the screw encounters axial loads during operation, these loads are distributed across both the axial load limiter and the motor, thereby reducing direct forces on the motor and contributing to an extended use of the motor component.